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EXAMINER	
RUSSELL, WANDA Z	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,480	LIU ET AL.	
	Examiner	Art Unit	
	WANDA Z. RUSSELL	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/4/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, and 11-37* is/are rejected.

7)☒ Claim(s) *4-10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

For the amended claim 1, the original word "for" on line 8 (second line form the end), before the word "detecting", was missing and should be returned and marked strikethrough. The alternative way is removing the underline for the word "for" on line 5 before the word "processing".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being anticipated by Jun et al. (U.S. Patent 6,810,084 B1).

For **claim 1**, Jun et al. teach an apparatus (Fig. 5) comprising:

a Null-Packet Detector (120 in Fig. 5) for processing a stream of fixed-length packets (data segments each include a 188-byte transport packet, refer to col. 5, lines 10-11) received by said apparatus (115 is a receiver of the encoded signals) as digitally encoded signals (MPEG data, refer to col. 5, line 11) and having multiple packet types (null packets, refer to abstract, line 12, & col. 5, lines 40-43. Based on the specification of the application, the multiple packet types mean data & null packets. See P. 10, or

publication [0054]), each packet including a header portion and a data portion (it is well-know that each packet includes a header portion and a data portion, as in the cited Fu reference, see Fig. 1), the header portion containing a sync byte (it is inherent that header portion contains a sync byte, as in the cited Fu reference, see Fig. 1),

wherein said Null-Packet Detector processes the stream by detecting whether a received packet is a null-packet (a null packet detector for checking whether the formatted data include the null packets, refer to col. 3, lines 58-60) and for identifying the location of the sync-byte of a detected null-packet (when the formatted data include the null packets, outputting skip pulses and training sync signals, refer to col. 3, lines 60-61. “When” is the location).

For **claim 2**, Jun et al. teach the apparatus of claim 1, wherein the Null-Packet Detector further generates a Null_flag signal (skip pulses, refer to col. 3, line 61) to indicate whether a received packet is a null-packet (a null packet detector for checking whether the formatted data include the null packets, refer to col. 3, lines 58-60) and generates a Null_sync signal (training sync signals, refer to col. 3, line 61) to indicate the location of the sync-byte of a detected null-packet. (when the formatted data include the null packets, outputting skip pulses and training sync signals, refer to col. 3, lines 60-61).

For **claim 3**, Jun et al. teach the apparatus of claim 2, further comprising a circuit (145-Fig. 5) adapted to insert a predetermined sync-byte value into the sync-byte position indicated by the Null_sync signal (Fig. 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al. (U.S. Patent 6,810,084 B1), in view of Hashimoto et al. (U.S. Patent 6788654 B1).

For **claim 11**, Jun et al. teach everything claimed as applied above.

However, Jun et al. fail to specifically teach the apparatus of claim 2, wherein the Null-Packet Detector determines whether a received packet is a null-packet by comparing contents of the header portion of the received packet with a first predetermined value.

Hashimoto et al. teach the apparatus of claim 2, wherein the Null-Packet Detector determines whether a received packet is a null-packet by comparing contents of the header portion of the received packet with a first predetermined value (comparing said bit error rate with a predetermined threshold value to judge … the null packet is a packet in which all bits except for first synchronizing bytes (47HEX) are 1, refer to col. 2, lines 40-43 & 58-59. The fact of all bits 1 is a first value).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Hashimoto et al. to obtain

the invention as specified, to provide an improvement in effectiveness of the detection system.

For **claim 12**, Jun et al. and Hashimoto et al. teach everything claimed as applied above.

However, they fail to specifically teach the apparatus of claim 11, wherein the Null-Packet Detector determines whether a received packet is a null-packet by further comparing contents of the data portion of the received packet with a second predetermined value.

Hashimoto et al. teach the apparatus of claim 11, wherein the Null-Packet Detector determines whether a received packet is a null-packet by further comparing contents of the data portion of the received packet with a second predetermined value (comparing said bit error rate with a predetermined threshold value to judge … the null packet is a packet in which all bits except for first synchronizing bytes (47HEX) are 1, refer to col. 2, lines 40-43 & 58-59. The fact of not all bits 1 is a second value).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Hashimoto et al. to obtain the invention as specified, to provide an improvement in effectiveness of the detection system.

5. **Claims 13-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al. (U.S. Patent 6,810,084 B1), in view of Chien et al. (Pub No. US 2003/0115345 A1).

For **claim 13**, Jun et al. teach an apparatus (Fig. 5) comprising:

a Syndrome Detector for processing a stream of fixed-length packets (data segments each include a 188-byte transport packet, refer to col. 5, lines 10-11) received by said apparatus (115 is a receiver of the encoded signals) as digitally encoded signals (MPEG data, refer to col. 5, line 11) and having multiple packet types (null packets, refer to abstract, line 12, & col. 5, lines 40-43. Based on the specification of the application, the multiple packet types mean data & null packets. See P. 10, or publication [0054]), each packet including a header portion and a data portion (it is well-know that each packet includes a header portion and a data portion, as in the cited Fu reference, see Fig. 1),

a Null-Packet Detector (120 in Fog. 5) adapted to detect whether a received packet is a null-packet (a null packet detector for checking whether the formatted data include the null packets, refer to col. 3, lines 58-60), and adapted to identify the location of the sync-byte of a detected null-packet (when the formatted data include the null packets, outputting skip pulses and training sync signals, refer to col. 3, lines 60-61. “When” is the location), and

an MPEG Sync-Byte Re-insertion circuit for inserting a predetermined value into the sync-byte location indicated by an MPEG synchronization signal (16-Fig. 5).

However, Jun et al. fail to specifically teach the header portion containing a checksum-encoded sync byte; a Syndrome Detector for detecting the checksum-encoded sync-byte and for generating a Sync_flag signal to indicate the location of the checksum-encoded sync-byte; and an MPEG Sync-Byte Re-insertion circuit for inserting

a predetermined value into the sync-byte location indicated by an MPEG synchronization signal.

Chien et al. teach the header portion containing a checksum-encoded sync byte (perform the IP header checksum check to be compliant to the TCP/IP standard and to allow the early detection of the Cipher key out-of-sync situation, refer to [0076], lines 2-4);

a Syndrome Detector (IP header Checksum Check, refer to [0076], line 1, implies there is a Syndrome Detector) for detecting the checksum-encoded sync-byte (perform the IP header checksum check to be compliant to the TCP/IP standard and to allow the early detection of the Cipher key out-of-sync situation, refer to [0076], lines 2-4) and for generating a Sync_flag signal to indicate the location of the checksum-encoded sync-byte (If the checksum check fails, the base drops the packet and processes the next packet, refer to [0076], lines 9-10, implies generating a Sync_flag signal to indicate the location of the checksum-encoded sync-byte).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Hashimoto et al. to obtain the invention as specified, to provide an improvement in effectiveness of the detection system.

For **claim 14**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 13, wherein the Null-Packet Detector is further adapted to output a Null_sync signal to indicate the location of the sync-byte of a

detected null-packet (when the formatted data include the null packets, outputting skip pulses and training sync signals, refer to col. 3, lines 60-61. “When” is the location).

For **claim 15**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 14, further comprising:

a multiplexor (145-Fig. 5), wherein the Sync_flag output of the Syndrome Detector (120-Fig. 5) and the Null_sync output of the Null-Packet Detector are multiplexed (Fig. 5) and are alternatively output by the multiplexor, to be used by the MPEG Sync-Byte Re-insertion circuit (16-Fig. 5), according to whether null packets have been detected.

For **claim 16**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 15, further comprising a decisional logic circuit operatively connected to the multiplexor and adapted to control the multiplexor so that when the Null-Packet Detector detects null packets, the Null_sync output of the Null Packet Detector is output by the multiplexor to be used as the MPEG synchronization signal by the MPEG Sync-Byte Re-insertion circuit (Fig. 5).

For **claim 17**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 14 adapted so that when null packets are detected, the Null_sync output of the Null Packet detector is used as the MPEG synchronization signal used by the MPEG Sync Re-insertion circuit (Fig. 5).

For **claim 18**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 17, wherein when null packets are not detected, the Null_sync output of the Null Packet detector is not used as the MPEG

synchronization signal used by the MPEG Sync Re-insertion circuit (Fig. 6, and Nn is from 1 to Nn, refer to col. 6, line 34. When there is no null packet, the training sync signals will indicate it and it will not be used as the MPEG synchronization signal used by the MPEG Sync Re-insertion circuit).

For **claim 19**, Jun et al. teach everything claimed as applied above. In addition, Jun et al. teach the apparatus of claim 18, wherein when null packets are not detected, the Sync_flag output by the Syndrome Detector (120-Fig. 5) is used as the MPEG synchronization signal used by the MPEG Sync Re-insertion circuit (Fig. 5).

6. **Claims 20-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al. (U.S. Patent 6,810,084 B1), in view of Chien et al. (Pub No. US 2003/0115345 A1), and Hashimoto et al. (U.S. Patent 6788654 B1).

For **claim 20**, Jun et al. teach a method comprising:

processing a stream of fixed length packets (data segments each include a 188-byte transport packet, refer to col. 5, lines 10-11) received by said method as digitally encoded signal (115 is a receiver of the encoded signals),

However, Jun et al. fail to specifically teach each packet containing a checksum-encoded sync-byte, the stream including a plurality of packets that each contain a first fixed bit pattern in the header portion of each packet, the method comprising: performing a first detection step of decoding the checksum in the stream to detect a checksum-encoded sync byte position candidate in the current one of the fixed length packets; and performing a second detection step to detect the first fixed bit pattern in the header portion of the current one of the fixed length packets; if the first fixed bit

pattern is detected in the stream of fixed length packets, then identifying the sync-byte position of the sync-byte of each of the fixed length packets based upon the detection of the first fixed bit pattern; inserting a predetermined sync-byte value into the identified sync-byte position.

Chien et al. teach each packet containing a checksum-encoded sync-byte (header checksum, refer to [0076], line 1; and out of sync, refer to [0076], line 4), and performing a first detection step of decoding the checksum in the stream to detect a checksum-encoded sync byte position ([0076], lines 1-end).

Further, Jun et al. in view of Chien et al. does not teach the stream including a plurality of packets that each contain a first fixed bit pattern in the header portion of each packet, and performing a second detection step to detect the first fixed bit pattern in the header portion of the current one of the fixed length packets.

Hashimoto et al. teach the stream including a plurality of packets that each contain a first fixed bit pattern in the header portion of each packet, and performing a second detection step to detect the first fixed bit pattern in the header portion of the current one of the fixed length packets (comparing said bit error rate with a predetermined threshold value to judge … the null packet is a packet in which all bits except for first synchronizing bytes (47HEX) are 1, refer to col. 2, lines 40-43 & 58-59. The fact of all bits 1 is a first value), and if the first fixed bit pattern is detected in the stream of fixed length packets, then identifying the sync-byte position of the sync-byte of each of the fixed length packets based upon the detection of the first fixed bit pattern; inserting a predetermined sync-byte value into the identified sync-byte position (the

synchronizing code (hexadecimal 47) inserted in front bytes of respective TS packets, refer to col. 8, line 46 & lines 43-49).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Chien et al. and Hashimoto et al. to obtain the invention as specified, to provide an improvement in effectiveness of the detection system.

For **claim 21**, Jun et al., Chien et al., and Hashimoto et al. teach everything claimed as applied above. In addition, Jun et al. teach the method of claim 20, wherein the second detection step is performed only if a checksum-encoded sync byte position candidate is detected in the first detection step (data field sync signal, refer to col. 3, line 41-42; and a null packet detector for checking whether the formatted data include the null packets, refer to col. 3, lines 58-60).

For **claims 22-24, 28-30**, **and 32-33**, Jun et al., Chien et al., and Hashimoto et al. teach everything claimed as applied above. In addition, Jun et al. teach wherein while the first fixed bit pattern is not detected in the stream of fixed length packets (it is obvious that not all packets are null packets), and Hashimoto et al. teach the inserting as described for claim 20, and Jun et al. teach checking all incoming packets (Fig. 5).

For **claim 25**, it is the same as claim 7 (Hashimoto et al. teach that packet with all bits 1 except for the sync bytes is a null packet) except depending on claim 20, therefore it is rejected for the same reason above.

For **claim 26**, Jun et al., Chien et al., and Hashimoto et al. teach everything claimed as applied above. In addition, Jun et al. teach wherein said header portions comprise transport headers of an MPEG-2 Transport Stream (Col. 2, line 28).

For **claim 27**, Jun et al., Chien et al., and Hashimoto et al. teach everything claimed as applied above. However, they fail to teach wherein the first fixed bit pattern is a predetermined pattern that includes at least one of the following MPEG-2 transport stream link header field values: payload_unit_start_indicator=`0`, PID=0x1FFF, transport scrambling control=`00`, and adaptation field=`01`.

Chien et al., teach wherein the first fixed bit pattern is a predetermined pattern that includes at least one of the following MPEG-2 transport stream link header field values: payload_unit_start_indicator=`0`, PID=0x1FFF, transport scrambling control=`00`, and adaptation field=`01` (Fig. 11).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Chien et al. and Hashimoto et al. to obtain the invention as specified, to define the header information.

For **claim 31**, Jun et al., Chien et al., and Hashimoto et al. teach everything claimed as applied above. However, they fail to teach the method of claim 28, wherein if neither of the first and second detection steps has identified a sync byte position, then no predetermined sync-byte value is inserted in the stream of fixed length packets.

Chien et al., teach wherein if neither of the first and second detection steps has identified a sync byte position, then no predetermined sync-byte value is inserted in the

stream of fixed length packets (if the checksum fails, drop the packet, refer to [0071], lines 5-6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Chien et al. and Hashimoto et al. to obtain the invention as specified, to define the effectiveness of the detection system.

For **claims 34 and 35**, Jun et al. teach a method and apparatus (Fig. 5, and especially 120) comprising:

processing a stream of fixed length packets (data segments each include a 188-byte transport packet, refer to col. 5, lines 10-11) received by said apparatus (115 is a receiver of the encoded signals) as digitally encoded signals (MPEG data, refer to col. 5, line 11), the stream including a plurality of packets that each contain a first data pattern in a PID portion (it is well-known that packets contain a data pattern in a PID portion, see Fu citation, Fig. 1),

However, Jun et al. fail to specifically teach each packet including a checksum-encoded sync-byte, and decoding the checksum in a preceding one of the fixed length packets to detect a checksum-encoded sync byte candidate in a current one of the fixed length packets, and if a checksum-encoded sync byte candidate is detected in the decoding step, then searching for the first data pattern in the PID portion of the current one of the fixed length packets.

Chien et al. teach each packet including a checksum-encoded sync-byte (header checksum, refer to [0076], line 1; and out of sync, refer to [0076], line 4), and decoding

the checksum in a preceding one of the fixed length packets to detect a checksum-encoded sync byte candidate in a current one of the fixed length packets ([0076], lines 1-end).

Further, Jun et al. in view of Chien et al. does not teach if a checksum-encoded sync byte candidate is detected in the decoding step, then searching for the first data pattern in the PID portion of the current one of the fixed length packets.

Hashimoto et al. teach if a checksum-encoded sync byte candidate is detected in the decoding step, then searching for the first data pattern in the PID portion of the current one of the fixed length packets (comparing said bit error rate with a predetermined threshold value to judge … the null packet is a packet in which all bits except for first synchronizing bytes (47HEX) are 1, refer to col. 2, lines 40-43 & 58-59. The fact of all bits 1 is a first value).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Jun et al. with Chien et al. and Hashimoto et al. to obtain the invention as specified, to provide an improvement in effectiveness of the detection system.

For **claims 36-37**, they are computer program product claims for a set-top-box and a television set (digital TV receiver, refer to Jun, col. 3, line 32), corresponding to method claim 20, therefore they are rejected for the same reason above.

Citation of Pertinent Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fu et al. (Pub No. US 2004/0136352 A1) disclose header portion contains a sync byte (102 and 106 in Fig. 1), and each packet includes a header portion and a data portion, (Fig. 3), and PID (Fig. 1).

Tanaka et al. (US Patent No. 7,280,475 B2) teach a receiver that processes a stream of fixed-length packets (see Fig. 17, and col. 19, line 25-col. 20, line 27).

Allowable Subject Matter

Claims 4-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

Applicant's amendment, filed 11/4/2008 has been received and considered.

Response to Arguments

Applicant's arguments, filed 11/4/2008 have been fully considered but they are not persuasive.

Applicant argues that Figure 5 of Jun is explicitly directed to a transmitter (see, e.g., Jun, col. 4, lines 39-41, and col. 5, lines 1-3). Accordingly, the first element in the transmitter of Figure 5 of Jun includes an encoder. Hence, Figure 5 of Jun does not teach or suggest processing a stream of fixed-length packets received as digitally encoded signals as recited in each of Claims 1, 13, 20, 34, and 35, since the transmitter of Figure 5 of Jun is itself performing the encoding prior to transmission and hence, is not receiving a stream of fixed-length packets as digitally encoded signals as recited in these claims.

In response, the Examiner respectfully disagrees.

The 115 of Fig. 5 by Jun et al. itself is a receiver, and the apparatus in Fig. 5 does processing a stream of fixed-length packets received as digitally encoded signals and having multiple packet types.

In addition, another reference, Tanaka et al. (US Patent No. 7,280,475 B2) teach a receiver that processes a stream of fixed-length packets (see Fig. 17, and col. 19, line 25-col. 20, line 27).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is

(571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/
Primary Examiner, Art Unit 2416

/Wanda Z Russell/
Examiner, Art Unit 2416